

What is claimed is:

1. A lower shield adapted to be fastened to a substrate support member in a plasma processing chamber having an upper annular shield coupled to the chamber's lip or walls, comprising:
 - a center portion having a first surface and a second surface opposite the first surface;
 - a bore disposed at least partially through the center portion and having a sidewall;
 - a groove disposed in the sidewall; and
 - a lip projecting from the first surface of a portion of the center portion, the lip configured to maintain a spaced-apart relation from the substrate support member.
2. The lower shield of claim 1, wherein the center portion further comprises a plurality of mounting holes and a plurality of lift pin holes disposed therethrough.
3. The lower shield of claim 1 further comprising at least one threaded hole adapted to receive an RF return strap electrically coupled to the shield.
4. The lower shield of claim 1, wherein the lip further comprises at least one threaded hole adapted to receive a RF return strap.
5. The lower shield of claim 1 further comprising:
 - a mounting ring disposed on the second surface and having an inner diameter; and
 - a mounting surface formed in the mounting ring and orientated tangentially to the inner diameter.
6. The lower shield of claim 5, wherein the mounting surface further comprises at least one threaded hole adapted to receive a RF return strap.

7. The lower shield of claim 1, wherein the lip and center portion are at least partially comprised or at least partially coated with aluminum.
8. The lower shield of claim 1, wherein the lip has a diameter greater than a diameter defined by a lower end of the shield.
9. A RF return lower shield for use in a plasma processing chamber having a substrate support member disposed inwards of an annular shield coupled to the chamber's walls, comprising:
 - a RF conductive center portion having a first surface and a second surface opposite the first surface;
 - a bore disposed at least partially through the center portion and having a sidewall;
 - a groove disposed in the sidewall;
 - a RF conductive lip projecting from the first surface of a portion of the center portion, the lip configured to maintain a spaced-apart relation from the substrate support member;
 - a mounting ring disposed on the second surface and having an inner diameter;
 - a mounting surface formed in the mounting ring and orientated tangentially to the inner diameter and
 - at least one threaded hole disposed in the mounting surface adapted to receive a RF return strap.
10. The lower shield of claim 9, wherein the mounting portion further comprises a plurality of mounting holes and lift pin holes disposed therethrough.
11. The lower shield of claim 9 further comprising an aperture extending through the center portion concentrically disposed inward of the bore.
12. A replaceable process kit for a processing chamber, the kit comprising:
 - a conductive, annular upper shield having a cylindrical portion

terminating in an end having a first diameter; and

a conductive lower shield comprising:

a center portion having a first surface and a second surface opposite the first surface;

a lip projecting from the first surface of a portion of the center portion and having a diameter greater than a diameter of the end of the cylindrical portion of the shield, the lip configured to maintain a spaced-apart relation from the substrate support member.

13. The kit of claim 12, wherein the lower shield further comprises:

a bore disposed at least partially through the center portion and having a sidewall; and

a groove disposed in the sidewall.

14. The kit of claim 12, wherein the center portion further comprises a plurality of mounting holes and a plurality of lift pin holes disposed therethrough.

15. The kit of claim 12, wherein the lower shield further comprise at least one threaded hole adapted to receive an RF return strap electrically coupled to the shield.

16. The lower shield of claim 12, wherein the lower shield further comprise:

a mounting ring disposed on the second surface and having an inner diameter; and

a mounting surface formed in the mounting ring and orientated tangentially to the inner diameter.

17. The kit of claim 12, wherein the lower shield and/or upper shield are at least partially comprised or at least partially coated with aluminum.